



30 August 2014

**Attention: Director - Infrastructure Projects
Development Assessment Systems & Approvals
Department of Planning & Environment
GPO Box 39
Sydney 2001**

Dear Director Re: SS1 13_6136 - NorthConnex

Set out below are my comments on the above proposal

In the first instance I would like to discuss some of the very recent points raised by NorthConnex on their website entitled “Addressing misconceptions about the project”

Statement: 'Trees and sound walls concealing the M1 motorway will be removed, along with houses in the vicinity. Neighbourhoods will be exposed to increased noise and pollution.'

Clarification

Sound walls concealing the M1 will not be removed permanently, however some will need to be relocated with new noise walls as part of construction. To construct the project there will need to be some properties and trees removed, but there is also a commitment to carry out landscaping and other urban design treatments.

My Comment: A commitment to carry out landscaping? Is that the best they can do? What about detailed plans and guarantees of minimum standards they will adhere to in ensuring the mature trees are replaced with suitably aged trees and not just bushes and saplings. “other urban design treatments” what does that mean or commit them to do?

Permanent noise walls would be scheduled for completion as early as possible in order to mitigate construction noise. Where possible, the use of temporary noise hoardings would be considered where ancillary construction facilities are in close proximity to sensitive residences.

My Comment: “temporary noise hoardings would be considered” but nothing will actually be done unless NorthConnex is forced to do something about the construction noise.

The existing noise walls along the M1 Motorway have been assessed in the EIS. As an outcome of this assessment, the existing barrier height would be maintained. This is shown in Figure 7-12 noise barriers – north, page 439 of the EIS.

My Comment: The EIS states that a large number of residential properties will be affected by increased noise on completion of the project and will require “noise treatment measures” Originally our house was assessed by NorthConnex for “noise treatment” by a letter dated 18th July 2014 and later rescinded in a further letter dated 25th August 2014. It does not give one a lot of confidence that they are operating at “best practice” which has been used consistently by NorthConnex in numerous documents and public meetings. If this is indeed “best practise” then we are all in trouble. There appears to be no effort made to reduce the impending increase in noise or improve the existing noise barriers. Why not? On reading the fine print it would appear to be not cost effective..... which is a common theme in this project

Statement: 'A single 23 metre high stack (about 8 stories) will pump 9 kilometres of tunnel pollution into our air.'

Clarification

The northern ventilation outlet would be around 15 metres in height, relative to nearby houses and located 23 metres in height relative to the motorway which is lower than the surrounding local roads.

My Comment: So they agree it will be 23 metres in height. Whats the problem and why are they trying to suggest its not that height? In other forums and documents the height of the stack is important in dispersing the “pollution” (tunnel air).

Air quality within the tunnel is maintained to ensure it is safe for users and the same air is dispersed high into the atmosphere through the

ventilation the outlets. Vehicles will travel within the tunnel for about six minutes, which is a significantly shorter travel time than Pennant Hills Road. As a result fewer emissions would be generated by vehicles using the tunnel compared to the stationary traffic currently releasing emissions at surface level in the local area for most of the day.

My Comment: "The air quality in the tunnel is maintained" by pushing clean air into the tunnel thereby removing the concentrated polluted air from 9 kilometres of tunnel and sending it into the atmosphere through the ventilation outlet. Nothing happens to the polluted air from 5000 trucks plus other vehicles each day as it is just pushed out of the aforementioned 23 or 15 metre high stack (depending from where you measure!)

Whats the difference between the ocean outfalls where we used to send untreated sewage into the sea and sending dangerous vehicle emissions into the residential suburb of Wahroonga? Have we learnt nothing?

Experience from other motorway tunnels and studies of ambient air quality data from existing Sydney tunnels has confirmed emissions from ventilation outlets have a negligible impact on local and regional air quality, and are so small they cannot be measured.

My Comment: There have been no studies of the ambient air in Wahroonga or anywhere within 1km of the proposed location of the Northern stack. They have recently put one near the brick pit near Pennant Hills road but not in Wahroonga. What are they afraid of?

Statement: 'Not all pollutants are dispersed, a significant proportion will expose the community.'

Clarification

Modelling has shown the effect of the vehicle emissions from the tunnel via the ventilation outlets to be negligible. Tunnels do not create new emissions. They take existing emissions from traffic, dilute them with fresh air and more effectively disperse them higher in the atmosphere through a ventilation outlet (rather than at roadside where they are currently dispersed).

As indicated above, total emissions generated by vehicles using the tunnel would be less than those vehicles using Pennant Hills Road.

My Comment: However what pollution they do create is all concentrated and put into the atmosphere around Wahroonga. They are just moving it from the tunnel to Wahroonga and sending into the air and hoping it will disperse and not be noticed.

Statement: 'No air pollution is treated. No filtration is planned.'

Clarification

There is no tunnel ventilation outlet in Australia that has filtration.

My Comment: Because its expensive to install and run & not cost effective when compared to other pollution reduction measures. (The M5 East Motorway filtration trial removed 200 kilograms of PM10 per year at a cost of around \$3.8million per tonne). Air pollution control technology is being used in tunnels in number of countries including Norway, Austria, Germany & Japan.

Statement: 'The tunnel ventilation design hopes to reduce the hazards in the tunnel from the daily pollution from 9,000 cars and 5,000 trucks. Doubts exist as to whether it can achieve this. More doubt surrounds the effectiveness of dispersing these toxins and carcinogens from the stack.'

Clarification

Sydney has a number of tunnels with ventilation systems that have been built and are operating to provide effective and efficient air quality both in tunnel and locally. The proposed tunnel ventilation system is being designed using international standards and tried and trusted technology and there are no doubts about how it will perform. The ventilation system will be designed to meet stringent in-tunnel, local and regional air quality criteria, and to operate under normal and low speed traffic conditions and in emergency situations. The tunnel ventilation system design is discussed in Section 7.3.1 in the EIS.

The air quality modelling detailed in the EIS took into account the tunnel ventilation design and how it performed under two different scenarios – the maximum number of vehicles within the tunnel at one time and having to meet applicable air quality criteria while emitting the maximum

concentration of pollutants on a continuous basis. A discussion of the air quality impact assessment scenarios is included in Section 7.3.2, page 462 of the EIS.

The modelling predicted the northern and southern ventilation outlets would have a negligible impact on local air quality. The air quality impact assessment methodology is outlined in Section 7.3.2 of the EIS. The assessment included the in-tunnel traffic volume forecasts for the project in 2019 and 2029. This is shown in Figures 7-16 and 7-17, respectively, in the EIS.

My Comment: The studies (using CALPUFF & CALMET) sourced data from 5 meteorological stations located in the Sydney basin (Lindfield, Terry Hills, Richmond, Prospect and Sydney Airport). No studies were done of the areas around where the proposed ventilation "pollution" stacks are to be located. Again there seems to be an avoidance of looking at the location of the stack and seeing if the proposed location is optimal for dispersing the pollution. Given that the prevailing winds etc are critical in dispersing the pollution why have they not carefully examined that aspect in some detail?

Why not locate the stack at the top of the ridge instead of the valley?

The Department of Planning and Environment has engaged its own air quality specialist to review the air quality modelling assessment for NorthConnex. The Department of Planning and Environment would specify the air quality criteria the tunnel would need to adhere to as part of the planning conditions of consent, **otherwise the tunnel could not operate.**

My Comment: The tunnel is open after 5 years work and say \$3 billion in cost and there is a problem with the air quality and "**the tunnel cannot operate**". Now what? What is plan B. Clearly it makes no sense to keep the tunnel closed after all that money has been spent so what happens next? The planning consents are watered down and the conditions to operate altered?

Statement: 'Future pollution will increase with up to 100,000 car and truck movements daily.'

Clarification

It is expected around 30,000 vehicles will use the tunnel on opening which will increase to around 40,000 by 2029. This is outlined in page 9 of the Project Overview document and detailed in Appendix E, Table 8-4 of the EIS.

My Comment: The eventual increase in traffic flows will increase pollution and be merely sent in concentrated form to the residents of Wahroonga.

Statement: 'This exposure represents major ongoing health risks including cancer and chronic lung disease. Traffic air pollution causes acute lung disease, asthma attacks, increased blood clotting, strokes, heart attacks, lung cancer, chronic blood vessel disease. It is especially hazardous to children, pregnant women and the aged.'

Clarification

Road tunnels do not generate pollution; vehicles using both surface roads and tunnels are the cause of the emissions. **“It is well known air pollution can be harmful to health, especially for more vulnerable members of the community.”**

My Comment: This is essentially the problem. We are taking 9 kilometres of vehicle emissions and sending them up in the air at Wahroonga and hoping nature will take care of the rest and that there will be negligible change in the air quality. This aspect is crucial to the whole NorthConnex plan yet they have failed to undertake any air quality monitoring of the affected area so we do not have any true base to compare against future pollution levels. On that basis alone the project should not be allowed to proceed as planned until they provide the Wahroonga community a watertight plan to ensure the health of the air that they will breath.

Statement: 'There is no safe level of exposure.'

Clarification

It is acknowledged that for fine particulate matter there is no level identified below which adverse effects no longer occur.

My Comment: Again we have agreement that there is a health problem for those who live or go to school near the stack.

Statement: A local study by Cowie et al looked at the health effects of the Lane Cove Tunnel, which found residents living around the tunnel ventilation stack reported more upper and lower respiratory symptoms and had lower lung volumes after the tunnel opened.

Clarification

The assertion above is a partial outcome from the paper by Cowie et al (2012). It is correct the study did report more upper and lower respiratory tract symptoms and lower lung volumes after the tunnel opened, however this was only for the first year and did not persist after the first year of operation. The study could also not be correlated with any change in air quality in the same area.

Some reasons for the observations made in the study were speculated but could not be determined. The lead author for the study has provided further clarification on the outcome of this study in the media this year (Cowie 2014) stating the study showed no increase in air pollutants, and did not show a significant effect that could be attributed to the ventilation outlets.

My Comments: The above is hardly a glowing recommendation for the NorthConnex project which will have the longest tunnel in Australia and much longer than the Lane Cove Tunnel.

Other Comments and questions

I now wish to make a few points regarding the project that have not necessarily been covered in the above.

In reviewing the F3-M2 State Significant Infrastructure Application Report - September 2013 a number of questions arise.

In section 3.2.1 "The project may include an open section in a cutting at Kenley Park and Brickpit Park. The need for and suitability of this opening would be further considered as part of determining the preferred project design.

Question: This no longer appears to be in the project. What issues caused this change?

*In section 3.2.4 F3 Freeway "to cater for the connection to the project, modifications to the F# Freeway beyond the northern interchange may be required.....it is expected that these works would **occur within the existing road reserve** and may extend around one kilometre north of the Edgeworth David overpass at Wahroonga".*

Question: Why has this not happened and instead residential houses are being acquired ?

In section 4.4.1 Air Quality"Major air pollutants emitted from vehicles...These pollutants are potentially harmful to human health"

Question: Given the above what guarantees is NorthConnex and the Government giving the residents and schoolchildren of Wahroonga & Waitara about the quality of air that they will be forced to breath and having no adverse health impact in the future.

In section 5.2.2 Potential Impacts. Wahroonga Heritage Conservation Area. The location of project infrastructure would be designed based on the avoidance of potential impacts where possible including avoidance of the Wahroonga Conservation Area....

Question: Given the above comments how can they justify the acquisition of houses, widening the road and building the stack and other facilities at the proposed location in Bareena Avenue

The Equilibria Proposal

I have studied the Equilibria proposal and it offers numerous advantages over the NorthConnex project and It addresses many of the concerns of residents in Wahroonga.

Unsolicited proposal from NorthConnex.

In looking at this project it appears to have been designed to achieve a financial outcome and deliver returns to investors and therefore the construction costs and operating costs have been the major driver in the overall design of the tunnel. Unlike a tunnel project where the relevant government department works out the best long term route and design. At that point it may work with Private enterprise to build the project.

Whilst this project takes trucks off Pennant Hills road (great) and provides a seamless link with the south and west it will not alleviate the traffic from the north wishing to go the city or anywhere down the Pacific Highway. That in my view is a significant draw back of this overall project. Had the RED OPTION route (see State significant infrastructure application report) been chosen which would intersect with the M2 much further south at Macquarie Park then a significant portion of daily traffic from the north which presently uses the Pacific Highway would use this tunnel instead thereby taking traffic from two inadequate and congested roads.

The NorthConnex proposal will in my view delay considerably to the numbers of years (10+) before any serious planning and work is done on the overall preferred long term option being strategic corridor C (the northern route and part of the Sydney Orbital)

Ventilation Stacks

It is proposed to have only two ventilation outlets (north & south) thereby concentrating the emissions over a small area. Why would it not be fairer and less risky to the health of Wahroonga residents to spread these over the length of the tunnel by having 3-5 other Vents operating?

Apparently the ventilation stacks work best when placed very close to the portals. Yet the proposed placement of the northern stack is some distance from the portal. Why is this?

I also note that there are no Ventilation stacks proposed for the two portals located at the Pacific Highway entry and exit near Lucinda Avenue. Why is this?

CAPS submission

I have seen a draft of their submission and fully endorse its comments.

Conclusion

NorthConnex has not adequately addressed the air quality concerns of the residents of Wahroonga.

There has been no survey of the air quality in Wahroonga to establish a solid base to compare with any changes that may occur as a result of the polluting stacks. An independent study needs to be undertaken first before any further work or approvals are given.

NorthConnex should provide full details of its plan “B” should the air quality not meet the agreed guidelines (thereby closing the tunnel for vehicle use) before any approvals are given.

NorthConnex should be requested to supply for consideration a fully costed proposal for filtration of the emissions before any approval is given.

NorthConnex should be requested to supply for consideration a fully costed proposal for the northern tunnel to be extended 1-2 kilometres thereby moving the ventilation stacks into bush and industrial area. This would take the health risks away from a densely populated area and have the added benefit of reducing noise in the area. Again this should be done before any approval is given and enable the relevant parties to consider all the options available rather than just that proposed by NorthConnex.

